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EXAMINER

GILMAN, ALEXANDER

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 6-8, 11, 23, 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Tate et al.

With regard to claim 6, Tate (US 6,861,862) disclose a needle-like member that constitutes a conductive contact which electrically connects a first object (21) to a second object (13), the needle-like member comprising:

a columnar member(30) having a first end and a second end;

a through hole extending entirely through the columnar member from the first end to the second end and

a contact member (17) configured to electrically contact with the first object and arranged at the first end.

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With regard to claims 7, 8, Tate discloses that the second object is a circuit board (13) that includes a circuit for generating and transmitting an electrical signal to be supplied to the first object.

With regard to claim 11, Tate discloses that the contact member (17) is located near a periphery of the columnar member in a longitudinal direction to come in contact with a periphery of a connecting electrode of the first object.

With regard to claim 23, Tate discloses a needle-like member that constitutes a conductive contact which electrically connects a first object to a second object, the needle-like member comprising:

a columnar member(14) having a first end and a second end, and a through hole that connects the first end to the second end; and

a contact member (no.r.n. – a contact disposed opposite to 16) configured to electrically contact with the first object and arranged at the first end,

wherein the columnar member and the contact member are integrally formed.

With regard to claim 27, Tate discloses that the through hole has hole portions with different inner diameters (40, 36).

Claims 6-8, 11, 12- 15, 17-21, 23- 26, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Vinther et al

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With regard to claims 12, 18, 23, 6, Vinther et al (US 6,396,293) disclose (Fig. 2)

conductive contact that electrically connects a first object to a second object, the conductive contact comprising:

a first needle-like member (18) that includes a columnar member having

a first end and a second end;

a through hole that connects the first end to the second end; and

a contact member (22) integrally formed with columnar member (claim 23) and

configured to electrically contact with the first object and arranged

at the first end; and

a second needle-like member (34,36) that is arranged to electrically connect to the first needle-like member, and including a support member having a sliding portion (36) that is slidable in the longitudinal direction while being in contact with an inner surface of the through hole such that the entire sliding portion has a constant diameter; and

a spring member (16) that is fixed to the first needle-like member and surrounds an outer surface of the columnar member., and applies an elastic force on the second needle-like member present in the through hole.

With regard to claims 13, 14, 19,20, 24, 25, Vinther et al disclose that the second

object (col. 1, lines 4-11) is a circuit that generates and transmits an electrical signal to be supplied to the first object.

With regard to claim 15, 21, 26, 27, 6, Vinther et al disclose that the through hole has a constant diameter (Fig. 2,6).

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With regard to claim 17, Vinther et al disclose that the second needle-like member includes a support member (36) that is slidable in the longitudinal direction while being in contact with an inner surface of the through hole; and a contact member (26) that is integrally formed with the support member, and configured to electrically contact with the second object.

With regard to claim 18, Vinther et al disclose (Fi. 2, 9) conductive contact unit comprising:

a conductive contact including

a needle-like member that includes a columnar member (14) having a first end and a second end, a through hole that connects the first end to the second end, and a contact member (22) configured to electrically contact with an object; and

a spring member (16) that biases the needle-like member in a direction perpendicular to the object; and

a conductive contact holder (100) that includes a holder hole for accommodating the conductive contact.

With regard to claims 11, 28, Vinther et al disclose the contact member (22) is located near a periphery of the columnar member in a longitudinal direction to come in contact with a periphery of a connecting electrode of the first object.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vinther in view of Kagami.

With regard to claim 22, Vinther et al do not disclose that the columnar member has the through hole portions with different inner diameters.

Kagami et al (US 7,049,838) disclose the columnar member having the end (125) of the through hole with different inner diameter.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to enlarge the end of the through hole, as taught by Kagami, to meet a geometry of a first object terminals.

On the other hand, the spec does not disclose what is a functional necessity of the variation in the inner diameter of the hole, so it can be considered as a design alternative.

Response to Arguments

Regarding claim 6 rejected over Tate, Applicant argues that the reference does not teach a columnar member having a first end and a second end and a through hole extending entirely through the columnar member from the first end to the second end.

However, an element 30 having both ends opened was recited as a columnar member.

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Regarding claim 18 rejected over Vinther et al, Applicant argues that the reference does not teach a columnar member(18) having a first end and a second end and a through hole extending entirely through the columnar member from the first end to the second end.

Hoiwever, it is not claimed that the second end (22) has an opening. The through hole extends from r.n. 20 to r.n. 51 which is a top surface of the second end.

The same response would applicable to claim 6, if element 14 is interpreted as a columnar member with through hole.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander D. Gilman whose telephone number is 571 272-2004. The examiner can normally be reached on Monday-Friday, 10:30 a.m. - 8:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Renee S. Luebke can be reached on 571 272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alexander D Gilman/
Primary Examiner
Art Unit 2833

5/07/09